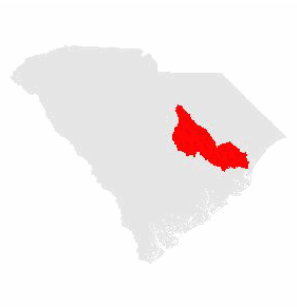
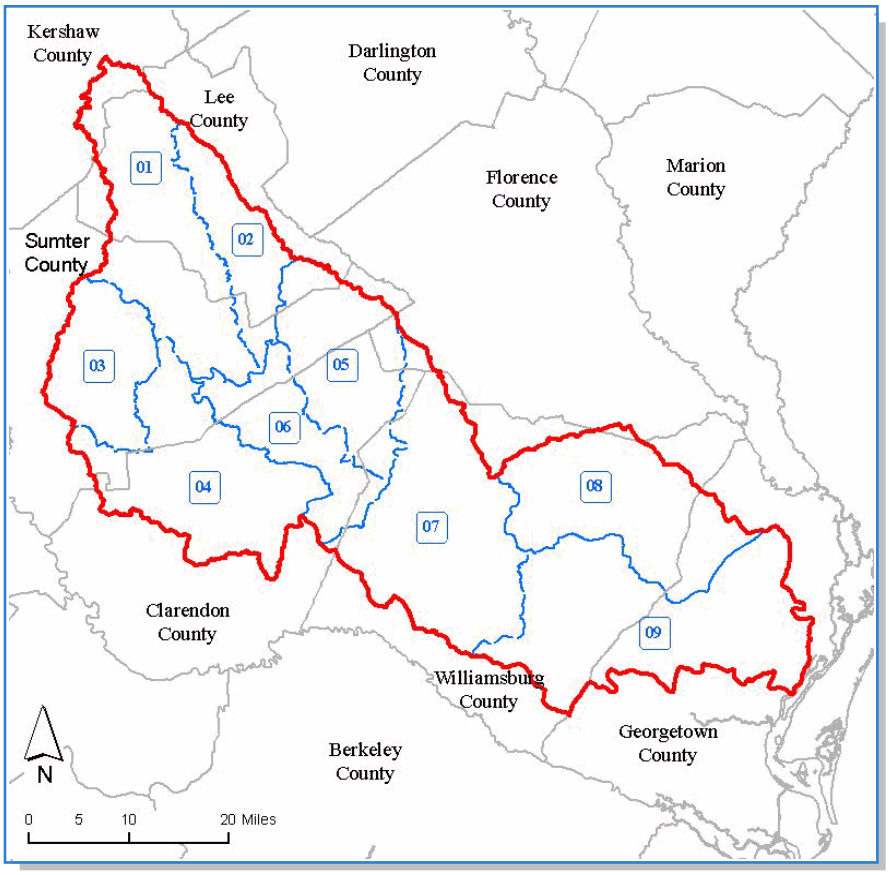
BLACK Subbasin

August 31, 2007

An Assessment of the Black Subbasin

Hydrologic Unit Code (8 Digit): 03040205





WATERSHED (10-digit HUC)
(E.g., 01 = 0304020501)

01	Scape Ore Swamp
02	Headwaters Black River
03	Cane Savannah Creek
04	Pocotaligo River
05	Pudding Swamp
06	Upper Black River
07	Middle Black River
08	Black Mingo Creek
09	Lower Black River

NRCS
Natural Resources Conservation Service

EXECUTIVE SUMMARY

Watershed Description

The Black River originates in the Sand Hills and Atlantic Southern Loam Plains of South Carolina and drains approximately 2,059 square miles (1.318 million acres) into the Great Pee Dee River just north of Georgetown which in turn drains into Winyah Bay on the Coast. The lower part of the river, below Kingstree, becomes tidal a few miles above Pinetree Landing and, below Peahouse Landing, becomes much wider and deeper. Significant tributaries to the Black River include Rocky Bluff Swamp and the Pocotaligo River in the north of the subbasin and Pudding Swamp, Kingstree Swamp Canal, and Black Mingo Creek in the south of the subbasin.

The Black River subbasin lies primarily in the Southeastern Plains (65) and Middle Atlantic Coastal Plain (63) ecoregions (Figure 1). A brief description of the Level III ecoregions in this watershed is available in this document's appendix. A more detailed description of the Level III and Level IV Common Resource Areas (Ecological Regions) is available online (See Griffith *et al.* 2002 in References section.).

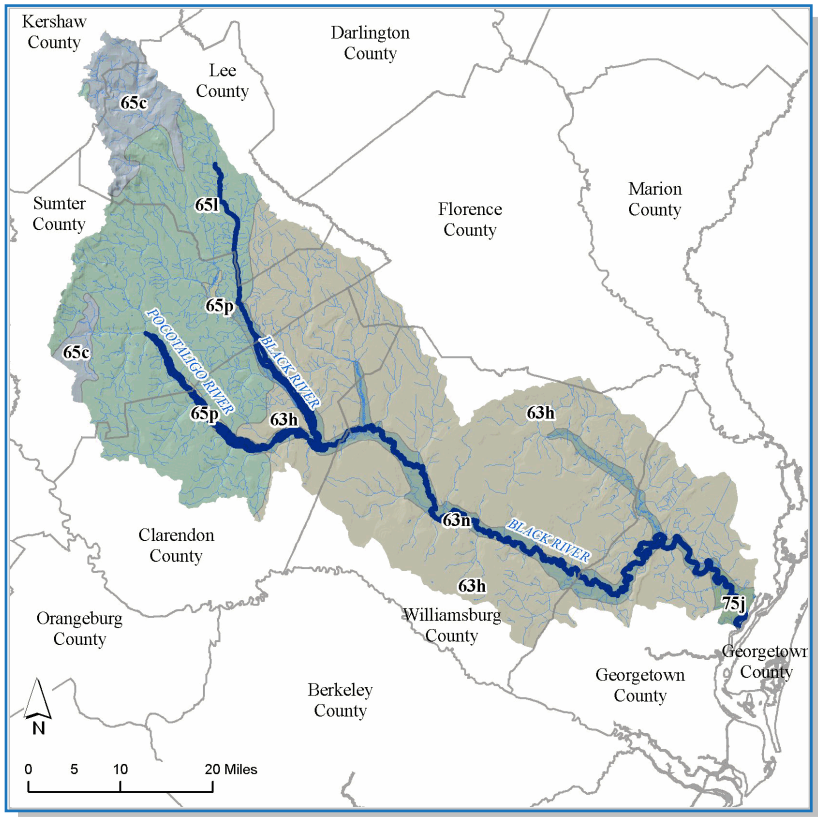


FIGURE 1:
LEVEL IV ECOLOGICAL REGIONS

63h	Carolina Flatwoods
63n	Mid-Atlantic Floodplains and Low Terraces
65c	Sand Hills
65l	Atlantic Southern Loam Plains
65p	Southeastern Floodplains and Low Terraces
75j	Sea Islands/Coastal Marsh

EXECUTIVE SUMMARY

Land Use/Land Cover

The only major urban area in the subbasin is Sumter in the northwest; other urban clusters in the watershed include Manning, Bishopville, Andrews, Kingstree and a part of Georgetown (Figure 2). According to the 2002 Agricultural Census, much of the farmland in this subbasin (Clarendon, Lee, Sumter and Williamsburg Counties) is dedicated to crops (Table 2) such as grains, oilseeds, cotton and some tobacco.

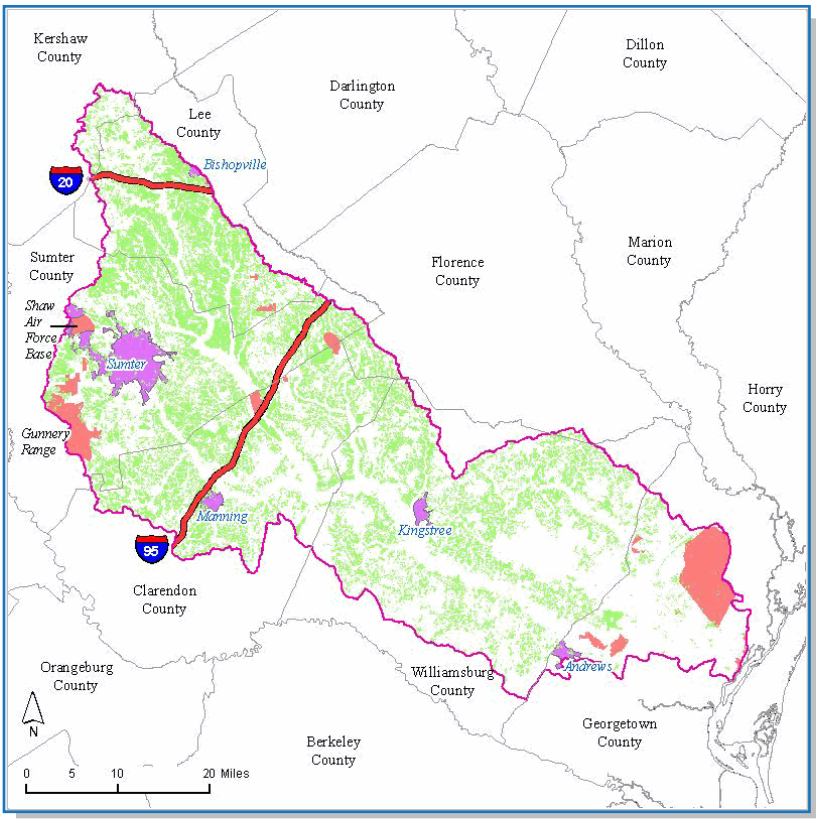


FIGURE 2:
MAJOR LAND USE/LAND COVER CATEGORIES

- FSA Farm Fields
- Urban Areas
- Parks & Land Under Easement
- Other Land

Table 1:
MAJOR LAND USE/LAND COVER CATEGORIES

	Acres	% of Watershed
Watershed (Total)	1,318,176	-
Urban Area	35,426	3%
Parks/Land Under Easement (not NRCS)	53,965	4%
Farm Service Agency Designated Farm Fields	392,375	30%

EXECUTIVE SUMMARY

Table 2:
AGRICULTURAL LAND USE: FSA ACREAGE AND ESTIMATED FARM FIELD USE FROM THE 2002 AG CENSUS
(NASS Whole County Data Used. Cropland includes: Field Crops, Orchards, and Specialty Crops.)

County	FSA Fields (Acres)	% Pasture (Estimated)	% Cropland (Estimated)	% Hayland (Estimated)
Clarendon	81,586	3%	94%	3%
Florence	7,189	4%	94%	3%
Georgetown	10,564	13%	80%	7%
Kershaw	3,870	21%	54%	25%
Lee	78,799	3%	94%	4%
Sumter	95,610	7%	88%	5%
Williamsburg	114,759	5%	92%	3%

Summary of Resource Concerns

The following is a summary of resource concerns for the watershed. Each resource concern has a more detailed analysis provided in its corresponding section.

Soils
Land capability limitations are dominated by wetness in this subbasin and are typical of an area within the Coastal Plain. Hydric soils or partially hydric soils comprise 83% of the subbasin and are the key resource concerns. Highly erodible soils are confined to the upper part of the subbasin.

Water Quantity
Awaiting SCDNR's new state water assessment.

Water Quality
Dissolved oxygen, fecal coliform, biological (benthic invertebrates).

Plant Condition
Crops of economic importance include corn (for grain), soybeans, wheat for grain, cotton and sod harvested.

Fish, Wildlife and Native Plants
According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: Biologists have identified habitat protection as one of the most important actions to ensure the protection of South Carolina priority species. Loss and fragmentation of habitat have been identified as a major threat to many of the species listed as threatened and endangered in South Carolina.

Domestic Animals
Sizeable turkey, swine and poultry populations exist, mainly in the north and west of the subbasin. There is currently an increase in the number of Poultry and Turkey operations in the watershed with two 8 house farms being constructed in the Scape Ore watershed. There are several more operations in various stages of permitting.

Economic and Social Factors
-

EXECUTIVE SUMMARY

Progress on Conservation

Table 3:
A SUMMARY OF NRCS APPLIED CONSERVATION TREATMENTS (ACRES)
(See Appendix for NRCS Conservation Practices used for Conservation Treatment Categories.)
(Applied practice data is reported on a fiscal year basis commencing on October 1st)

Conservation Treatments	2004	2005	2006	Total
Buffers and Filter Strips	363	498	179	1,040
Conservation Tillage	7,729	194	3,251	11,174
Erosion Control	3,455	4,692	1,919	10,066
Irrigation Water Management	172	3,790	466	4,428
Nutrient Management	2,186	3,445	1,650	7,281
Pest Management	885	3,515	719	5,119
Prescribed Grazing	204	302	46	552
Trees and Shrubs	1,223	1,387	397	3,007
Wetlands	471	3,784	1,495	5,750
Wildlife Habitat	1,195	835	1,547	3,577

Table 4:
LANDS REMOVED FROM PRODUCTION BY FARM BILL PROGRAMS (WHOLE COUNTY DATA SHOWN)

County	Conservation Reserve Program (ac) 2005	Conservation Reserve Program (ac) 1986 - 2005	Grassland Reserve Program (ac) 2005	Farmland & Ranch Protection Program (ac) 2005	Wetland Reserve Program (ac) 2005
Clarendon	10,367	111,412	-	-	6,184
Florence	3,545	60,525	-	-	19
Georgetown	2,557	35,260	-	100	4,166
Kershaw	5,139	136,864	-	-	-
Lee	13,138	231,561	-	-	2,490
Sumter	10,246	138,931	83	921	4,649
Williamsburg	20,532	293,154	-	-	2,405

Table 5:
APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL)
(See SCDHEC 2007 (a) in Reference Section.) - SCDHEC Contact: Matt Carswell - (803) 898-3609

TMDL Document	Numberof Stations	Parameter of Concern	Status	WQMS ID Standard Attained
Pee Dee Basin	3	Fecal Coliform	Completed & Approved	PD-239
Scape Ore Swamp	1	Fecal Coliform	Approved & Implementing	-

Table 6:
OTHER PLANS, ASSESSMENTS, AND PROJECTS IN THE WATERSHED

Organization	Description	Contact	Telephone
SCDNR	Black Scenic River Project	Mary Crockett	803-734-9111
NRCS	Conservation Security Program Priority Watershed (2005)	Craig Ellis	803-253-3930
NRCS	Andrews Watershed Project	Stephen Henry	803-765-5350
SCDHEC	Watershed Water Quality Assessment: Pee Dee River Basin (2000)	Roger Hall	803-898-4142

EXECUTIVE SUMMARY

Other Watershed Considerations

The Black River Swamp Preserve (1,276 acres) is located in Georgetown County near Andrews, South Carolina.

A 75-mile segment of the Black River is designated as a scenic river. This scenic river segment begins at County Road #40 in Clarendon County and extends southeast through Williamsburg County to Pea House Landing at the end of County Road #38 in Georgetown County, South Carolina.

RESOURCE CONCERNS

Soils

A majority (69%) of land in this Coastal Plain subbasin has limitations due to wetness (Table 7). Most of the wetness is associated with hydric soils along streams in riparian areas (Figure 5, Table 10). Droughtiness is a concern in about 14% of the area (Table 7) and occurs mostly in the sandy soils of the Sand Hills in the upper part of the subbasin in Kershaw and Sumter counties (Figure 1). Low soil organic matter in these sandy soils is a soil health concern. Erosion is a resource concern only in the Sand Hills area of the upper Black subbasin (Figure 4). Only 8% of the land is classified as highly or potentially highly erodible (Table 9). Almost 80% of the land in the Black subbasin is either prime farmland (42%) or statewide important farmland (36%) and occurs on upland areas in the subbasin (Figure 3, Table 8).

Table 7:
LAND CAPABILITY CLASSES (See NRCS 2007 [a] and [b] in References section.)

Percentages are based on the whole watershed (1,318,176 ac).

Land Capability Class 1	Acres	Percent
1 - Slight limitations	128,037	10%

	% Land by Subclass Limitation					
	Erosion (e)		Wetness(w)		Droughtiness (s)	
Land Capability Classes 2-8	Acres	Percent	Acres	Percent	Acres	Percent
2 - Moderate limitations	55,058	4%	382,638	29%	106,967	8%
3 - Severe limitations	7,926	1%	287,462	22%	52,029	4%
4 - Very severe limitations	4,262	0%	9,284	1%	27,203	2%
5 - No erosion hazard, but other limitations	-	-	11,615	1%	-	-
6 - Severe limitations; unsuitable for cultivation; limited to pasture, range, forest	600	0%	98,889	8%	4,345	0%
7 - Very severe limitations; unsuitable for cultivation; limited to grazing; forest, wildlife habitat	-	-	102,054	8%	1,741	0%

RESOURCE CONCERNS

Prime Farmland

FIGURE 3:
PRIME FARMLAND
(See NRCS 2007 [a] and [b] in References section.)

Table 8:
PRIME FARMLAND

Prime Farmland Categories	Acres	Percent of Land
All areas are prime farmland	396,740	30%
Farmland of statewide importance	478,704	36%
Not prime farmland	280,041	21%
Prime farmland if drained	162,652	12%
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	0	0%
Prime farmland if irrigated	0	0%
Prime farmland if irrigated and drained	0	0%
Prime farmland if protected from flooding or not frequently flooded during the growing season	0	0%

RESOURCE CONCERNS

Highly Erodible Land

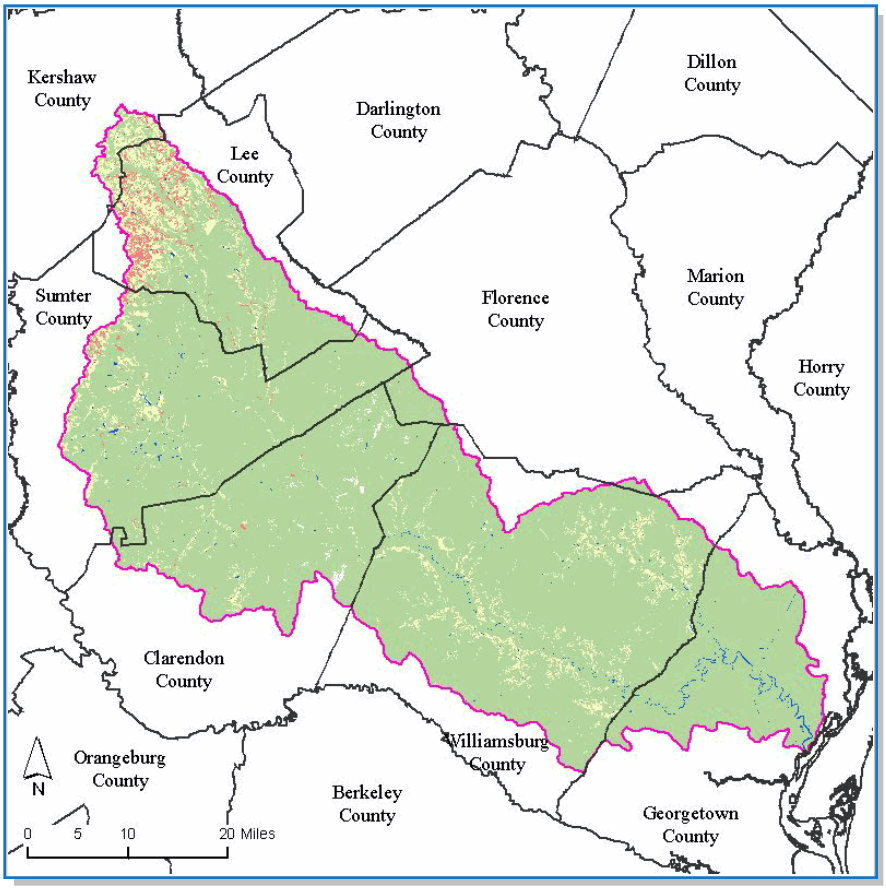


FIGURE 4:
HIGHLY ERODIBLE LAND
(See NRCS 2007 [a] and [b] in References section.)

Table 9:
HIGHLY ERODIBLE LAND

Highly Erodible Land Categories	Acres	Percent of Watershed
Highly erodible land	18,535	1%
Not highly erodible land	1,197,875	91%
Potentially highly erodible land	91,663	7%

RESOURCE CONCERNS

Hydric Soils

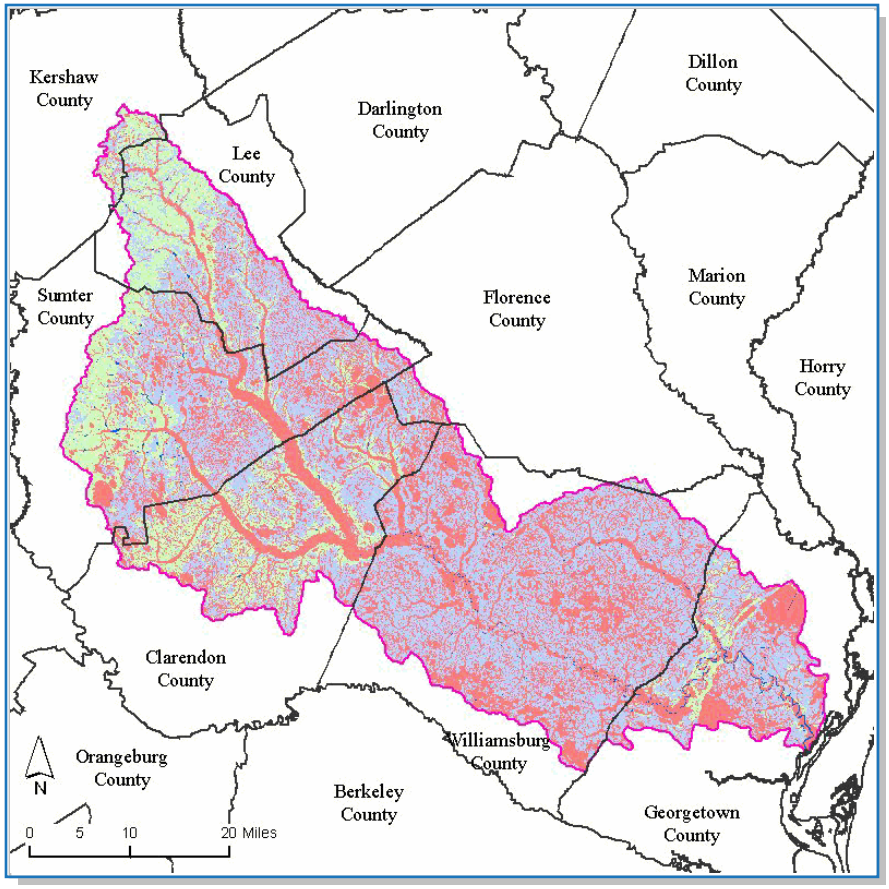


FIGURE 5:
HYDRIC SOILS
(See NRCS 2007 [a] and [b] in References section.)

Table 10:
HYDRIC SOILS

Hydric Soils Categories	Acres	Percent of Watershed
All Hydric	498,256	38%
Not Hydric	226,044	17%
Partially Hydric	593,836	45%

RESOURCE CONCERNS

Water Quantity

Irrigated water usage varies in the watershed. Sumter County uses the highest amount of water for irrigation (Table 12). Note that Georgetown County has the highest percentage of cropland under irrigation. Another agricultural use for water is for confined and pastured livestock and, while this is less intensive than that for irrigation, it is typically more widespread. The entire watershed is in located in the SCDHEC's Notice of Intent (NOI) or Capacity Use (CU) areas designated for the regulation of groundwater withdrawal. Note also that a considerable portion of the watershed in Williamsburg and Georgetown Counties is located on a cone of depression as designated by the SCDNR (Figure 6).

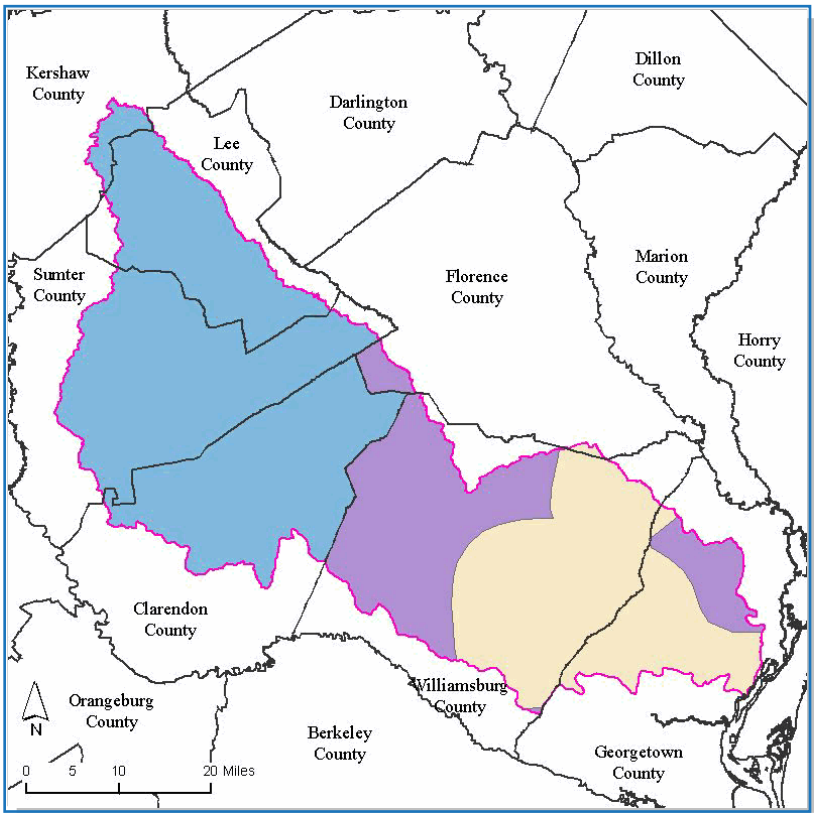


FIGURE 6:
WATERSHED RELATIVE TO CAPACITY USE AREAS, NOTICE OF INTENT AREAS, AND CONES OF DEPRESSION

Table 11:
CAPACITY USE, NOTICE OF INTENT, AND CONES OF DEPRESSION AREA IN WATERSHED
(See SCDHEC 2007 [c] and SCDNR 2004 in Refrerences Section.)

Area	Percent of Watershed
% Watershed in Cone of Depression and Capacity Use (CU) Area	27%
% Watershed in SCDHEC Capacity Use (CU) Area	21%
% Watershed in SCDHEC Notice of Intent (NOI) Area	53%

RESOURCE CONCERNS

Water Quantity Cont.

Table 12:
INDICATORS OF IRRIGATION WATER USAGE (WHOLE COUNTY DATA ARE USED)
(See NASS 2002 and SCDNR 2004 in References Section)

County	Total Irrigated Water Used MGD	Total NASS Cropland (ac)	Cropland Under Irrigation (ac)	Percent Cropland Under Irrigation	Water Use Gal/Ac/Day for Irrigated Land
Clarendon	5.72	91,881	1,704	1.9	3,357
Florence	5.29	103,576	2,505	2.4	2,112
Georgetown	4.79	15,152	1,325	8.7	3,615
Kershaw	0.45	23,510	903	3.8	498
Lee	0.77	84,966	1,072	1.3	718
Sumter	13.18	85,223	5,537	6.5	2,380
Williamsburg	2.31	100,908	758	0.8	3,047

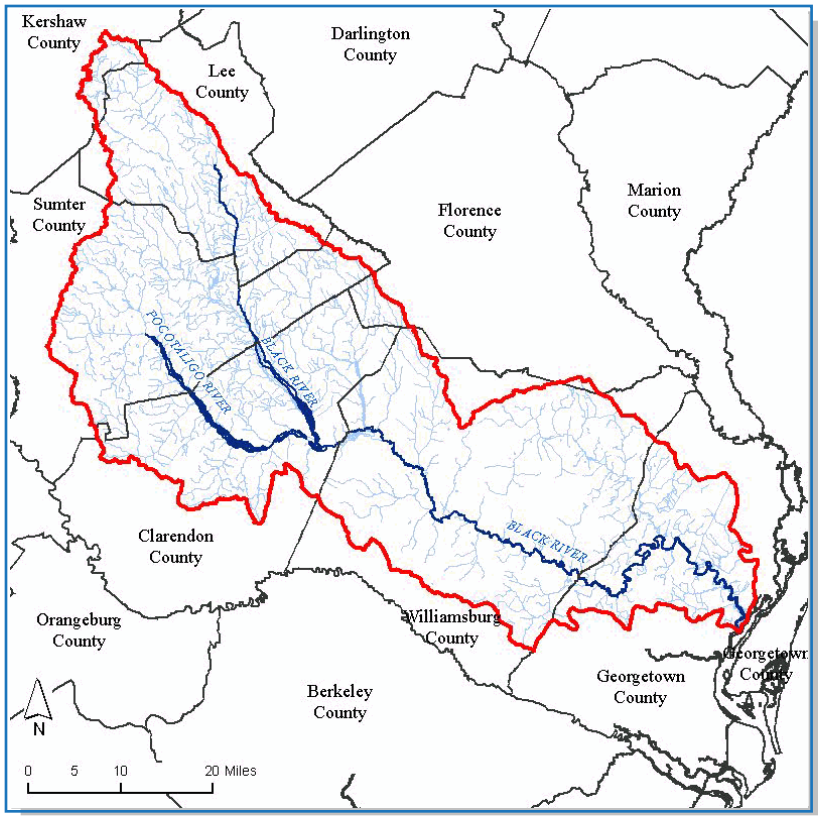


FIGURE 7:
NRCS ASSISTED FLOOD CONTROL STRUCTURES IN WATERSHED

- Flood Control Structure
- Main River
- Hydrography

Table 13:
NRCS IMPLEMENTED FLOOD CONTROL STRUCTURES

Number of Structures (in Watershed)	Maximum Storage (AcFt)	Number of Structures by Hazard Class			
		High	Low	Significant	Unclassified
0	-	0	0	0	0

RESOURCE CONCERNS

Water Quality

The number of surface water quality impairments is shown in Table 15 resulting in a "303(d)" listing of that Water Quality Monitoring Site (WQMS). Table 5 indicates what progress has been made to address surface water quality through the Total Maximum Daily Load (TMDL) process. Once a TMDL plan is approved, the WQMS is removed from the 303(d) list even though the standard may not have been attained. Note that standards for total nitrogen, total phosphorus, and chlorophyll-a only exist for lakes; therefore, no stream in the state can be listed for any of these three parameters.

The fecal coliform concern will be addressed through ongoing TMDLs (Table 5). Other impairments are dissolved oxygen and biological (benthic invertebrate) criteria (Table 15).

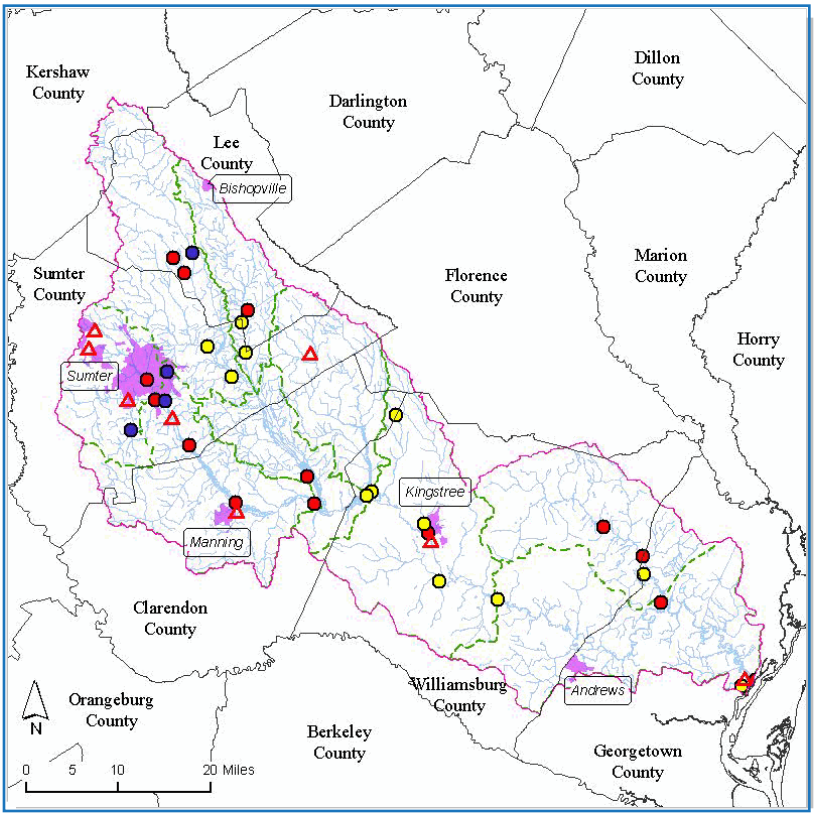


Table 14:
WATER QUALITY MONITORING SITES

Permanent Water Quality Monitoring Sites (WQMS)	29
Random Water Quality Monitoring Sites (WQMS)	17

FIGURE 8:
PERMANENT WATER QUALITY MONITORING SITES

- WQMS (No Impairment)
- WQMS (303d Listed)
- WQMS (Approved TMDL)
- Waste Water Treatment Plant
- Hydrography
- Hydrologic Unit Code 10 Boundary

Table 15:
NUMBER OF MONITORING SITES SHOWING SURFACE WATER QUALITY IMPAIRMENTS
(See SCDHEC 2006 in References for the state 303(d) list.)

Recreational Use Standard

Parameter	Impairments
Fecal Coliform	5

Fish Tissue Standard

Parameter	Impairments
Mercury	12
PCB's	0

Shellfish Harvest Standard

Parameter	Impairments
Fecal Coliform	NA

Aquatic Life Use Standard

Parameter	Impairments	Parameter	Impairments	Parameter	Impairments
Biological	6	Dissolved Oxygen	14	Total Phosphorus	0
Chlorophyll A	1	Ammonia Nitrogen	0	pH	0
Chromium	0	Nickel	1	Turbidity	1
Copper	1	Total Nitrogen	1	Zinc	0

RESOURCE CONCERNS

Plant Condition

Plants of Economic Importance

Plants of economic importance are shown in Table 16. The crops shown in this table are from NASS data where the top five crops, by acres, in each county are displayed. The timber statistics (CUEFS 2003), indicate the relative importance of the timber industry within the state and the importance of the timber industry compared to agriculture within the county.

The counties in this subbasin are especially rich with respect to crops, where Clarendon and Florence counties rank first in the state in corn (for grain) and soybean production. Other prominent crops include wheat for grain, cotton and sod harvested.

Native Plant Species

According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: in the sandhills, plants are a complex of xeric pine and pine-hardwood forest types adapted to sandy soils, typically found in fluvial sand ridges. Historically, a canopy of longleaf pine and a sub-canopy of turkey oak prevail, this was interspersed with scrub oak species and scrub-shrub cover. Management that includes burning encourages the development of longleaf pine-wiregrass communities.
Upland areas consist of forests dominated by hardwoods, primarily with oaks and hickories, and typically on fire-suppressed upland slopes near river floodplains or between rivers and tributaries. Vegetation composition is similar to oak-hickory forest in the Piedmont, where it is a major vegetation type. Representative canopy trees are: white oak (*Quercus alba*), black oak (*Quercus velutina*), post oak (*Quercus stellata*), mockernut hickory (*Carya tomentosa*), pignut hickory (*Carya glabra*), loblolly pine (*Pinustaeda*), flowering dogwood (*Cornus florida*) and black gum (*Nyssa sylvatica*).

In the river bottoms on the coastal plains, one frequently finds hardwood-dominated woodlands with moist soils that are usually associated with major river floodplains and creeks. Characteristic trees include: sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), water oak (*Quercus nigra*), willow oak (*Quercus phellos*), laurel oak (*Quercus laurifolia*), cherrybark oak (*Quercus pagoda*) and American holly (*Ilex opaca*).

The Cypress-tupelo swamp subtype occurs on lower elevation sites as seasonally flooded swamps. It is usually transected by tannic-acid rivers and creeks and contains oxbow lakes and pools. Dominant trees are bald cypress (*Taxodium distichium*) and water tupelo (*Nyssa aquatica*), swamp gum (*Nyssa biflora*), Carolina ash (*Fraxinus caroliniana*), water elm (*Planera aquatica*) and red maple (*Acer rubrum*).

RESOURCE CONCERNS

Table 16:
WHOLE COUNTY DATA OF PLANTS OF ECONOMIC IMPORTANCE IN SUBBASIN
(See: USDA NASS 2002 & Clemson University Forest Extension Services 2003 in References section)

Plant	Counties
All Cotton	Lee, Williamsburg, Florence, Sumter, Clarendon, Georgetown
All Vegetables harvested	Clarendon
All Wheat for grain	Florence, Williamsburg, Sumter, Lee, Clarendon, Kershaw
Corn for grain	Florence, Lee, Sumter, Clarendon, Georgetown, Kershaw, Williamsburg
Forage - land used for all hay and haylage, grass silage, and greenchop	Georgetown, Sumter, Williamsburg, Lee, Kershaw
Short-rotation woody crops	Kershaw
Sod harvested	Georgetown
Soybeans	Clarendon, Florence, Sumter, Lee, Kershaw, Williamsburg, Georgetown
Tobacco	Florence
Timber, Top 10 Rank in SC	Georgetown, Williamsburg
Timber Revenues Exceed Ag. Revenues	Georgetown

Table 17:
FEDERALLY LISTED THREATENED AND ENDANGERED PLANT SPECIES IN WATERSHED
(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Pondberry	*Lindera melissifolia*	Endangered
Chaff-seed	*Schwalbea americana*	Endangered
Sea-beach amaranth	*Amaranthus pumilus*	Threatened
Canby's dropwort	*Oxypolis canbyi*	Endangered
Michaux's sumac	*Rhus michauxii*	Endangered
Georgia aster	*Aster georgianus*	Supported Proposals to List

RESOURCE CONCERNS

Fish and Wildlife

The upper river is excellent for sport fishing; however, there is a DHEC advisory for the entire river, limiting the amount of fish that should be consumed each week, due to mercury pollution. The lower part of the river is poorer for fishing due to low oxygen content and pollution, including zinc, chromium, fecal coliform bacteria, pesticides, and turbidity. The subbasin is forested or agricultural, with high levels of pesticide use for tobacco and cotton.

For additional information, the SC Department of Natural Resources has completed a "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section).

In 2005, mercury advisories were issued for 57 water bodies in South Carolina. Higher concentrations of mercury in fish tissue tend to occur in the Coastal Plain of South Carolina with relatively lower concentrations (and therefore fewer advisories) in the Piedmont. For more details on fish advisories, please refer to the SCDHEC fish advisory website at: **http://www.scdhec.gov/environment/water/fish/**

Table 18:
FEDERALLY LISTED THREATENED AND ENDANGERED WILDLIFE SPECIES IN WATERSHED
(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Wood stork	*Mycteria americana*	Endangered
Red-cockaded woodpecker	*Picoides borealis*	Endangered
Kirtland's Warbler	*Dendroica kirtlandii*	Endangered

Table 19:
FEDERALLY LISTED THREATENED AND ENDANGERED AQUATIC SPECIES IN WATERSHED
(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Shortnose sturgeon	*Acipenser brevirostrum*	Endangered
Carolina heelsplitter	*Lasmigona decorata*	Endangered, Critical Habitat

RESOURCE CONCERNS

Domestic Animals

Grazing livestock populations in the subbasin are modest (Table 20). The subbasin contains relatively high densities of confined livestock (turkey, poultry, and swine) especially in the upper reaches of the subbasin (Figure 9, Table 5).

Table 20:
WHOLE COUNTY GRAZING ANIMAL POPULATION DATA FROM 2002 AG. CENSUS
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Cows/Calves	Grazing/Forage (ac)	County Rank in State
Clarendon	4,833	3,038	27
Florence	4,268	3,769	36
Georgetown	1,373	1,959	44
Kershaw	4,886	4,965	(D)
Lee	3,265	2,313	(D)
Sumter	5,680	6,023	32
Williamsburg	4,868	4,710	(D)

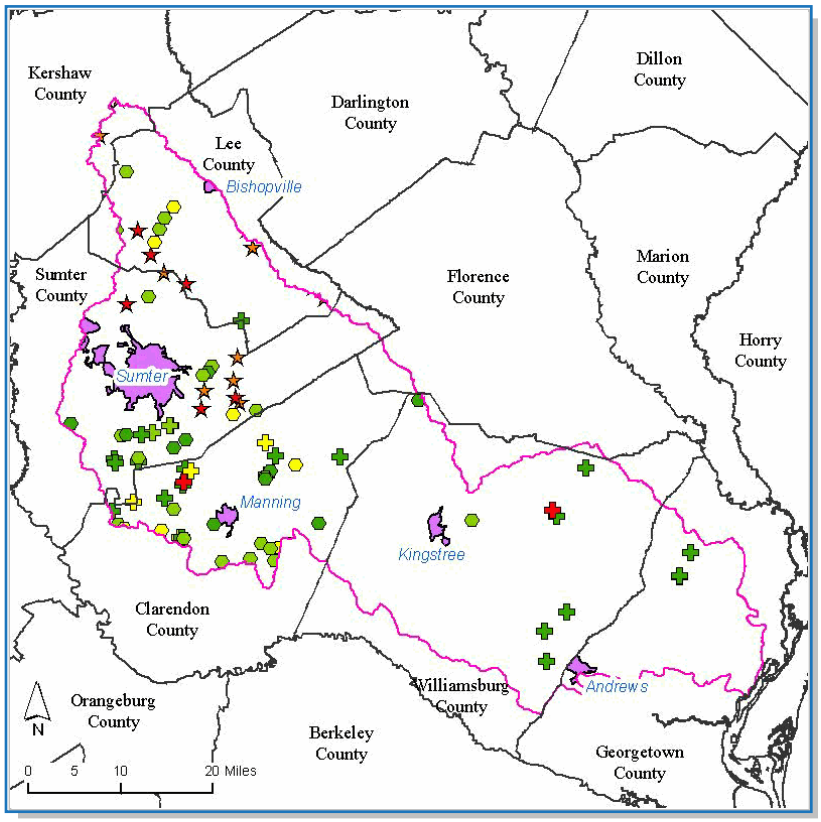


Table 21:
CONFINED ANIMAL POPULATION [As given by SCDHEC] (Au = Animal Unit = 1,000 lbs)

Beef Live Weight (Au)	-
Dariy Live Weight (Au)	-
Horse Live Weight (Au)	-
Poultry Live Weight (Au)	8,535
Swine Live Weight (Au)	8,858
Turkey Live Weight (Au)	15,164

FIGURE 9:
TYPE AND SIZE OF CONFINED ANIMAL OPERATION

Permit Design Count (Live Weight AU)
- 0 - 163
- 164-372
- 373 - 680
- 681 - 1360
- 1361 - 7076

- Beef
- Dairy
- Other
- Poultry
- Swine
- Turkey

ECONOMIC & SOCIAL FACTORS

The number of full-time farmers is similar to the state average of 47% and farm sizes are *larger* than the state average of 197 ac (Table 22); both parameters suggest average to above average levels of participation in conservation programs in the subbasin. Farm sizes *decreased* by an estimated 22% between 1997 and 2002, whereas on average farm sizes decreased by 13% across the state for the same period. Loss of cropland between 1997 and 2002 is estimated at 6%, somewhat lower than the SC average of 8% cropland loss.

The relative importance of crop and livestock commodity groups in the watershed is shown in Tables 24 and 25; a *qualitative* indication of the relative importance of timber is provided on Table 16.

For more economic and farm information from the 2002 Agricultural Census, more detailed reports for all South Carolina counties can be found at:
http://www.nass.usda.gov/census/census02/profiles/sc/index.htm

Table 22:
2002 FARM CENSUS DATA (WHOLE COUNTY DATA SHOWN) (SC average farm size = 197 ac)

County	Total Number of Farms	% Full Time Farmers	% Farms > 180 (ac)	Average Farm Size (ac)
Clarendon	390	47%	35%	379
Florence	612	57%	29%	280
Georgetown	226	46%	28%	242
Kershaw	479	46%	18%	146
Lee	324	42%	39%	378
Sumter	537	46%	28%	253
Williamsburg	681	44%	39%	302
Weighted Avg*	**497**	**45%**	**35%**	**318**

Table 23:
2002 FARM CENSUS ECONOMIC DATA (WHOLE COUNTY DATA SHOWN) (Results in $1,000)

County	Market Value of Ag Products Sold	Market Value of Crops Sold	Market Value of Livestock, Poultry, and Their Products	Farms with sales < $10,000
Clarendon	61,620	28,121	33,499	266
Florence	35,055	29,761	5,294	400
Georgetown	23,942	21,967	1,975	173
Kershaw	84,475	2,081	82,394	379
Lee	33,675	10,413	23,262	233
Sumter	55,146	15,274	39,872	402
Williamsburg	27,644	22,367	5,277	506
Weighted Avg*	**43,191**	**19,415**	**23,776**	**363**

* Weighted averages are estimated based on agricultural land use area.

ECONOMIC & SOCIAL FACTORS

Table 24:
VALUE OF CROP COMMODITY GROUPS - COUNTY RANK IN STATE
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Value of All Crops	Grains & Oilseeds	Tobacco	All Cotton	Vegetables & Melons	Fruits, Nuts, & Berries	Nursery, Etc.	Christmas Trees & Woody Crops	Hay & other Crops
Clarendon	7	2	7	16	2	(D)	12	(D)	(D)
Florence	6	7	2	10	7	(D)	26	(D)	19
Georgetown	11	25	9	21	41	(D)	4	(D)	43
Kershaw	38	27	-	(D)	24	(D)	30	(D)	14
Lee	20	6	10	6	34	(D)	32	(D)	11
Sumter	16	4	8	11	(D)	(D)	15	(D)	2
Williamsburg	10	10	5	4	12	(D)	17	(D)	31

Table 25:
VALUE OF LIVESTOCK AND POULTRY COMMODITY GROUPS - RANK IN STATE
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Value of Livestock, poultry	Poultry, Eggs	Cattle & Calves	Milk & Dairy	Hogs & Pigs	Sheep & Goats	Horses, etc.
Clarendon	13	11	27	-	5	(D)	12
Florence	27	25	36	(D)	15	(D)	33
Georgetown	39	41	44	(D)	9	(D)	37
Kershaw	1	1	(D)	(D)	(D)	29	2
Lee	14	13	(D)	(D)	(D)	44	39
Sumter	11	8	32	(D)	16	19	(D)
Williamsburg	28	(D)	(D)	-	7	(D)	15

REFERENCES

Clemson University Extension Forest Service. 2001. *Cash Receipts from Timber Harvests - 2001 Ag and Timber Comparison.*. Compiled by A. Harper. Available at:
http://www.clemson.edu/extfor/forest_data/

Griffith, G.E., Omernik, J.M., Comstock, J.A., Schafale, M.P., McNab, W.H., Lenat, D.R., MacPherson, T.F., Glover, J.B., and Shelburne, V.B., 2002, Ecoregions of North Carolina and South Carolina, (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,500,000). Available at:
http://www.epa.gov/wed/pages/ecoregions/ncsc_eco.htm

National Resource Inventory (NRI) 1997. Estimates of water erosion from Cropland by 8-digit HUC. Available at:
http://www.nrcs.usda.gov/technical/land/erosion.html

NatureServe 2006. Distribution of native fish species by watershed. NatureServe. Available at:
http://www.natureserve.org/getData/

South Carolina Department of Health and Environmental Control (SCDHEC) 2006. Listing of Impaired Waters (or 303(d) list). Available at:
http://www.scdhec.gov/environment/water/docs/06_303d.pdf

South Carolina Department of Health and Environmental Control (SCDHEC) 2007 (a). Total Maximum Daily Load Documents. Available at:
http://www.scdhec.gov/environment/water/tmdl/tmdlsc.htm

South Carolina Department of Health and Environmental Control (SCDHEC) 2007 (b). Watershed Water Quality Assessments. Available at:
http://www.scdhec.gov/environment/water/shed/

South Carolina Department of Health and Environmental Control (SCDHEC) 2007 (c). Water use and reporting Program (Capacity Use) SCDHEC. Available at:
http://www.scdhec.net/environment/water/capuse.htm

South Carolina Department of Natural Resources (SCDNR) 2005. Comprehensive Wildlife Conservation Strategy (2005 - 2010). Columbia, SC. SCDNR. Available at:
http://www.dnr.sc.gov/cwcs

South Carolina Department of Natural Resources (SCDNR) 2002. SC GAP Analysis and Dynamic Mapping. Columbia, SC. SCDNR. Available at:
http://www.dnr.sc.gov/GIS/gap/mapping.html

South Carolina Department of Natural Resources (SCDNR) 2004. South Carolina Water Plan, Second Edition (January 2004). Columbia, SC. SCDNR. Available at:
http://www.dnr.sc.gov/water/hydro/wtrplanerrata.html

USDA Farm Services Agency in South Carolina (FSA-SC) 2006. CRP Data. Columbia SC. USDA/FSA

USDA Natural Resources Conservation Services (NRCS) 2007 (a). National Soil Information System (NASIS). USDA/NRCS. County Soils Data (tabular) information available at:
http://soildatamart.nrcs.usda.gov/

REFERENCES

USDA Natural Resources Conservation Services (NRCS) 2007 (b). Soil Survey Geographic (Ssurgo) Database. USDA/NRCS. County Soils Data (spatial). Available at:
http://soildatamart.nrcs.usda.gov/

USDA Natural Resources Conservation Services in South Carolina (NRCS-SC) 2006. GRP, FRPP, and WHP. Columbia, SC. USDA/NRCS.

USDA National Agricultural Statistical Service (NASS) 2002. 2002 Census of Agriculture. Washington, DC: USDA/NASS.

US Fish and Wildlife Service (USFWS) 2007. USFWS Threatened and Endangered Species System (TESS). Available at:
http://ecos.fws.gov/tess_public/StartTESS.do

US Fish and Wildlife Service (USFWS) 2006. South Carolina Distribution Records of Endangered, Threatened, Candidate and Species of Concern, October 2006. Available at:
http://www.fws.gov/charleston/docs/etcountylist_10_06.htm

APPENDIX

Level III Common Resource Area (Ecological Region) Descriptions

Middle Atlantic Coastal Plain (63)

The Middle Atlantic Coastal consists of low elevation, flat plains, with many swamps, marshes, and estuaries. Forest cover in the region, once dominated by longleaf pine in the Carolinas, is now mostly loblolly and some shortleaf pine, with patches of oak, gum, and cypress near major streams. Pine plantations for pulpwood and lumber are typical, with some areas of cropland. In South Carolina, the Middle Atlantic Coastal Plain is divided into three level IV ecoregions Carolinian Barrier Islands and Coastal Marshes (63g), Carolina Flatwoods (63h), Mid-Atlantic Floodplains and Low Terraces (63n).

Southeastern Plains (65)

The Southeastern Plains are irregular with broad interstream areas have a mosaic of cropland, pasture, woodland, and forest. In the past centuries, human activities (logging, agriculture and fire suppression) removed almost all of the longleaf pine forests. Elevations and relief are greater than in the Southern Coastal Plain (75), but generally less than in much of the Piedmont (45). The ecoregion has been divided into three level IV ecoregions within South Carolina: Sand Hills (65c), Atlantic Southern Loam Plains (65l), and Southeastern Floodplains and Low Terraces (65p). Note: The Atlantic Southern Loam Plains (65l) is a major agricultural zone, with deep, well-drained soils, and is characterized by high percentages of cropland.

Southern Coastal Plain (75)

The Southern Coastal Plain extends from South Carolina and Georgia through much of central Florida, and further along the Gulf coast. It is a heterogeneous region also containing barrier islands, coastal lagoons, marshes, and swampy lowlands along the Gulf and Atlantic coasts. The South Carolina portion of the Southern Coastal Plain contains two level IV ecoregions: Floodplains and Terraces (75i), and Sea Islands/Coastal Marsh (75j).

NRCS Conservation Practices used for Conservation Treatment Categories in Table 3

Report Category	Practice Codes
Buffer and Filter Strips	332, 391, 393, 412
Conservation Tillage	324, 329, 329A, 329B, 344, 484
Erosion Control	327, 328, 330, 340, 342, 561, 585, 586
Irrigation Water Management	441, 449
Nutrient Management	590
Pest Management	595
Prescribed Grazing	528, 528A
Trees and Shrubs	490, 612, 655, 656, 66
Wetlands	657, 658, 659
Wildlife Habitat	644, 645

APPENDIX

Hydrologic Unit Numbering System

In 2005, the NRCS in cooperation with the U.S. Geological Survey, the South Carolina Department of Health and Environmental Control, and the U.S. Forest Service updated the South Carolina part of the USGS standard hydrologic unit map series. The report, "Development of a 10- and 12- Digit Hydrologic Unit Code Numbering System for South Carolina, 2005", describes and defines those efforts. The following is from the Abstract contained in that report: "A hydrologic unit map showing the subbasins, watersheds, and subwatersheds of South Carolina was developed to represent 8-, 10-, and 12-digit hydrologic unit codes, respectively. The 10- and 12-digit hydrologic unit codes replace the 11- and 14-digit hydrologic unit codes developed in a previous investigation. Additionally, substantial changes were made to the 8-digit subbasins in the South Carolina Coastal Plain. These modifications include the creation of four new subbasins and the renumbering of existing subbasins." The report may be obtained at **http://www.sc.nrcs.usda.gov/technical/HUC_report.pdf**. See Table 2 in the report for a cross-reference of old to new 8-digit HUC.

This subbasin profile uses the new HUC 8 numbering system with its modified and newly created subbasins. The NRCS reports implemented practices by 8-digit Hydrologic Unit Code. All NRCS reported Conservation Practices were reported using the older numbering system. 2005 and 2006 data were converted to the new HUC 8 numbering system through the Latitude and Longitude data reported with the applied practice. The use of these differing numbering systems has resulted in some NRCS implemented practices being credited in this report to an 8-digit HUC as reported by the NRCS but not correctly credited in the new numbering system. Likewise, the newly created 8-digit HUC will not be credited with the 2004 applied practices.